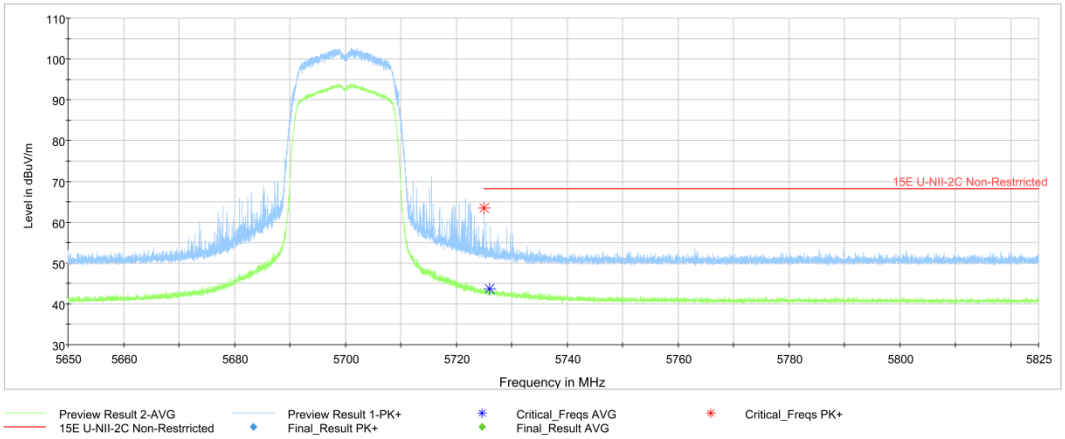


Fig. 16 Band Edges (802.11ac-HT20 , Ch140, 5700MHz)

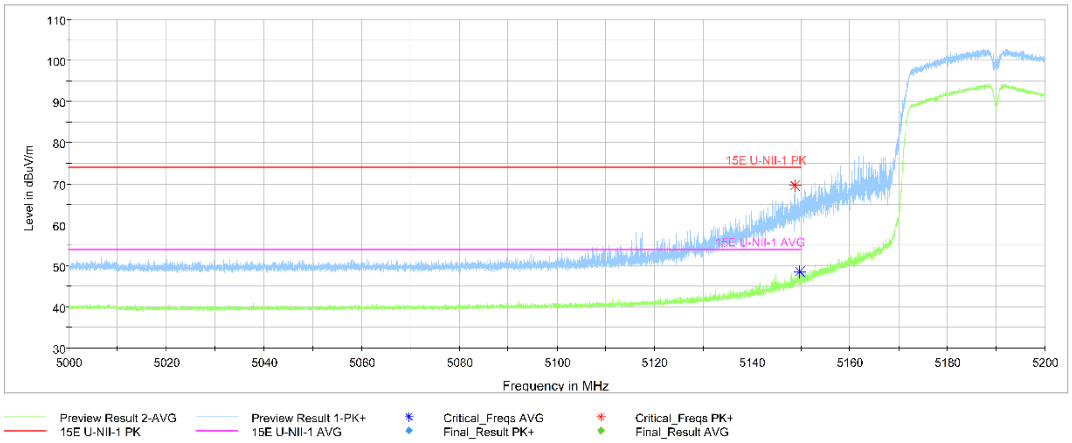


Fig. 17 Band Edges (802.11ac-HT40 , Ch38, 5190MHz)

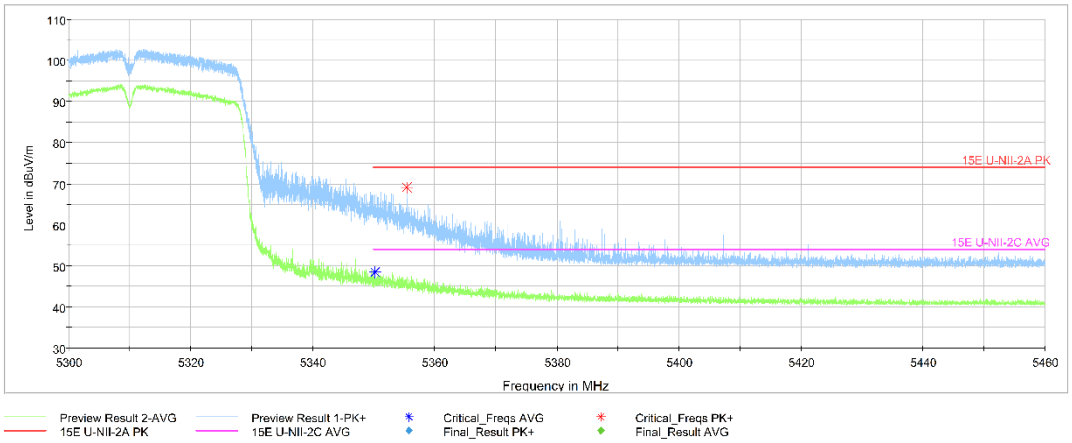


Fig. 18 Band Edges (802.11ac-HT40 , Ch62, 5310MHz)

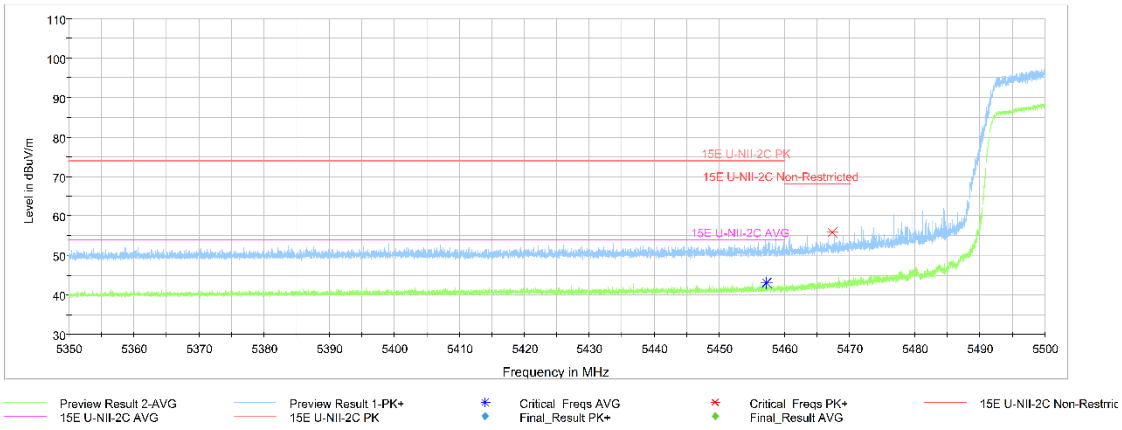


Fig. 19 Band Edges (802.11ac-HT40 , Ch102, 5510MHz)

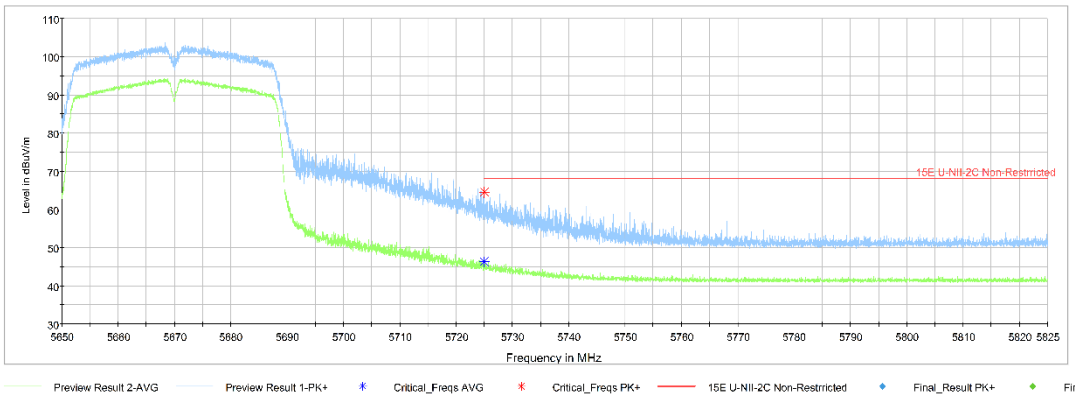


Fig. 20 Band Edges (802.11ac-HT40 , Ch134, 5670MHz)

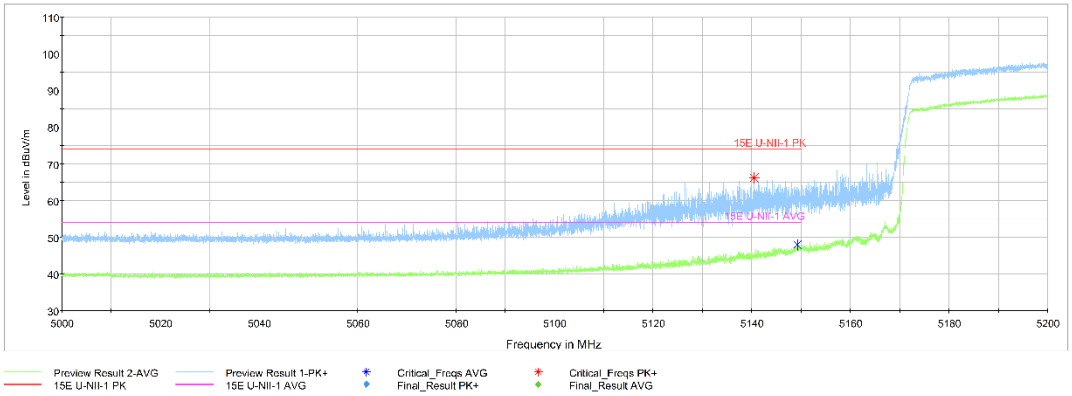


Fig. 21 Band Edges (802.11ac-HT80 , Ch42 , 5210MHz)

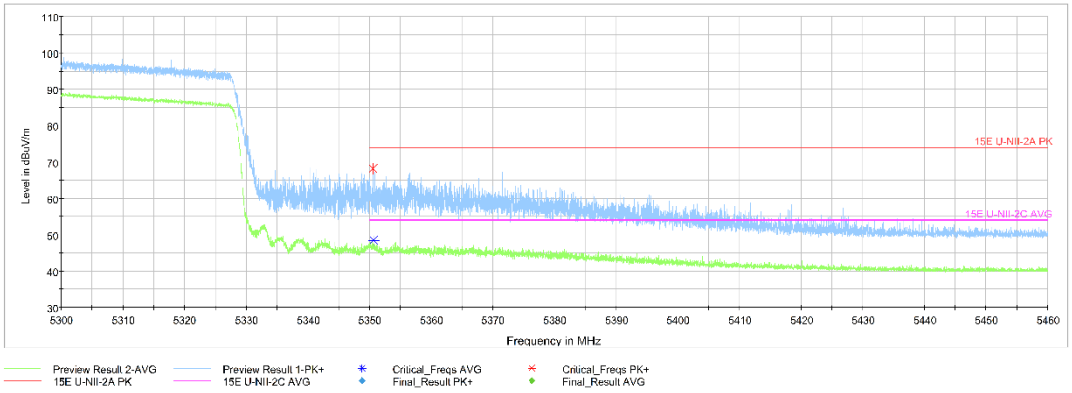


Fig. 22 Band Edges (802.11ac-HT80 , Ch58, 5290MHz)

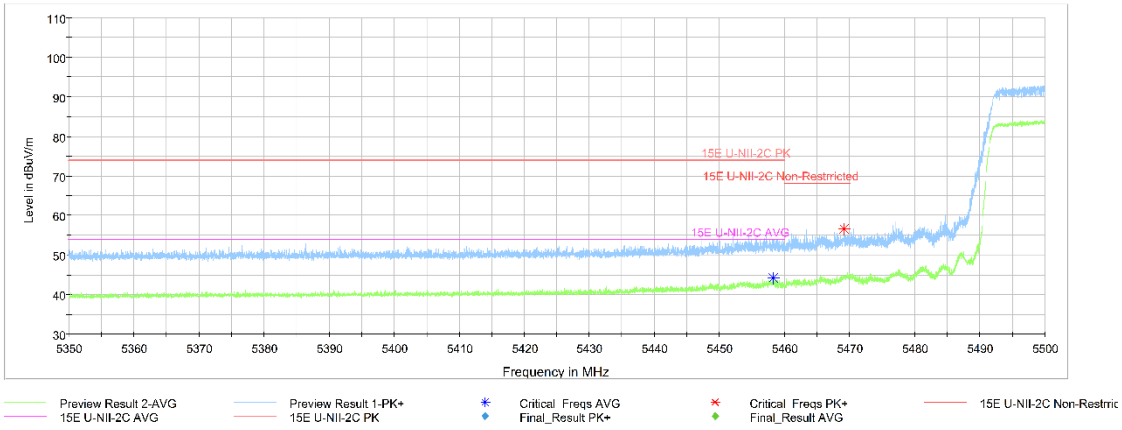


Fig. 23 Band Edges (802.11ac-HT80 , Ch106, 5530MHz)

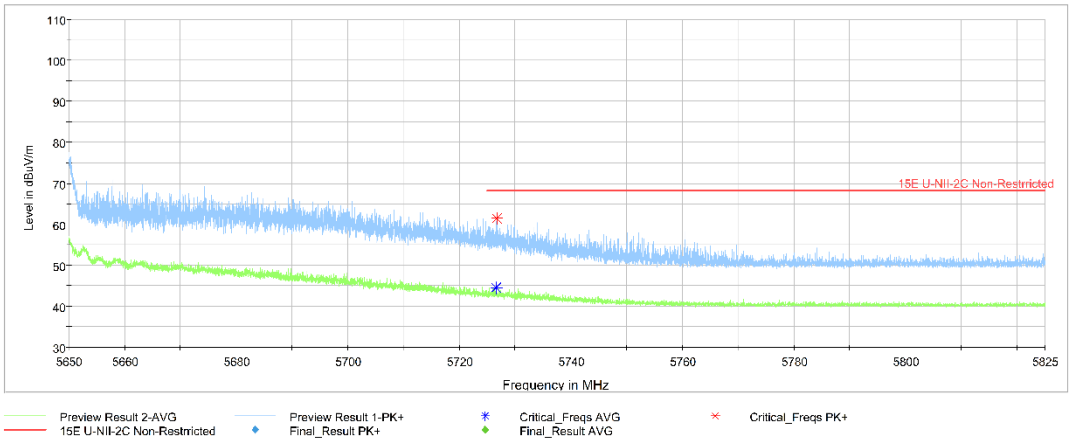


Fig. 24 Band Edges (802.11ac-HT80 , Ch122, 5610MHz)

A.6. AC Powerline Conducted Emission (150kHz- 30MHz)

A.6.1 Summary

All AC line conducted spurious emissions are measured with a receiver connected to a grounded LISN while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates and modes were investigated for conducted spurious emissions. Only the conducted emissions of the configuration that produced the worst case emissions are reported in this section

A.6.2 Method of Measurement

See Clause 6.2 of ANSI C63.10 specifically.

See Clause 4 and Clause 5 of ANSI C63.10 generally.

The conducted emissions from the AC port of the EUT are measured in a shielding room. The EUT is connected to a Line Impedance Stabilization Network (LISN). An overview sweep with peak detection was performed. The measurements were performed with a quasi-peak detector and if required, an average detector.

The conducted emission measurements were made with the following detector of the test receiver: Quasi-Peak / Average Detector.

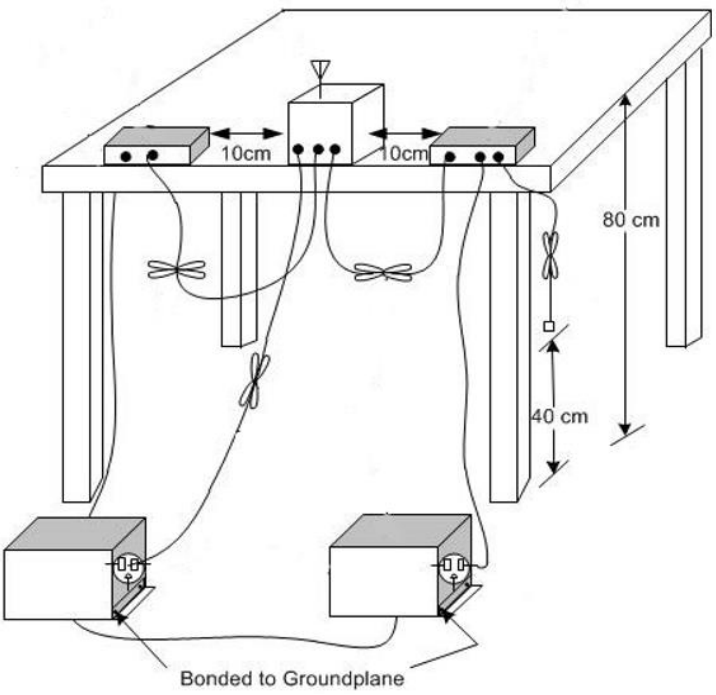
The measurement bandwidth is:

Frequency of Emission (MHz)	RBW/IF bandwidth
0.15-30	9kHz

A.6.3 Test Condition

Voltage（V）	Frequency（Hz）
120	60

A.6.4 Test setup



Measurement Result and limit:

WLAN (Quasi-peak Limit)

Frequency range (MHz)	Quasi-peak Limit (dBμV)
0.15 to 0.5	66 to 56
0.5 to 5	56
5 to 30	60
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.	

WLAN (Average Limit)

Frequency range (MHz)	Average Limit (dBμV)
0.15 to 0.5	56 to 46
0.5 to 5	46
5 to 30	50
NOTE: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz.	

Conclusion: PASS

Test graphs as below:

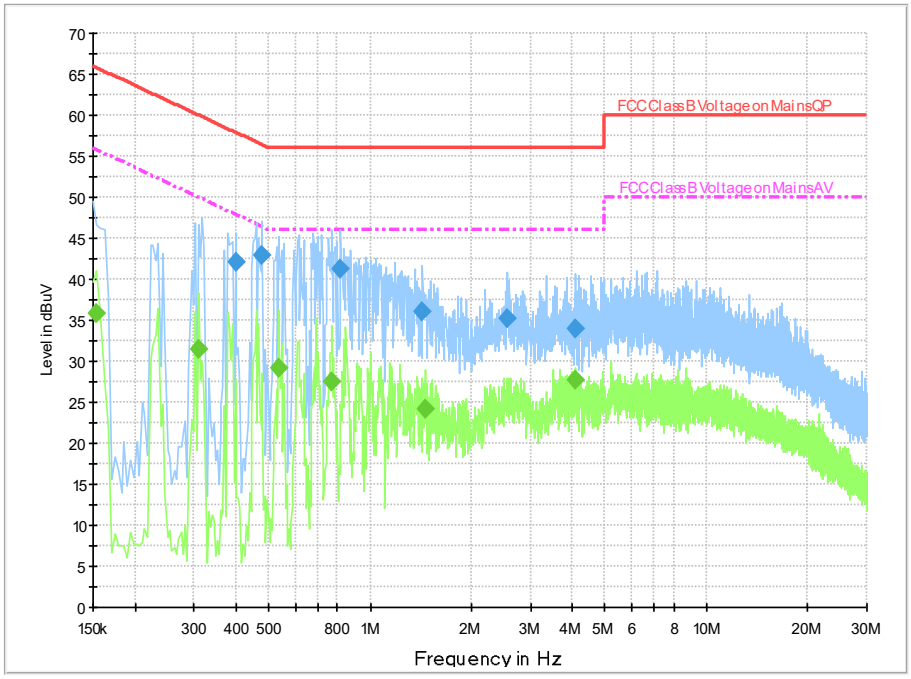


Fig.25 Conducted Emission(802.11a, Ch36, TX)

Final Result 1

Frequency (MHz)	QuasiPeak (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.398000	42.1	2000.0	9.000	On	L1	20.0	15.8	57.9
0.478000	42.9	2000.0	9.000	On	N	19.9	13.5	56.4
0.818000	41.3	2000.0	9.000	On	L1	19.9	14.7	56.0
1.434000	36.1	2000.0	9.000	On	L1	19.9	19.9	56.0
2.546000	35.2	2000.0	9.000	On	L1	19.8	20.8	56.0
4.090000	34.0	2000.0	9.000	On	L1	19.8	22.0	56.0

Final Result 2

Frequency (MHz)	CAverage (dBuV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin (dB)	Limit (dBuV)
0.154000	35.8	2000.0	9.000	On	L1	20.0	20.0	55.8
0.310000	31.4	2000.0	9.000	On	L1	19.9	18.6	50.0
0.534000	29.1	2000.0	9.000	On	L1	20.0	16.9	46.0
0.770000	27.5	2000.0	9.000	On	N	19.8	18.5	46.0
1.462000	24.2	2000.0	9.000	On	L1	19.9	21.8	46.0
4.090000	27.7	2000.0	9.000	On	L1	19.8	18.3	46.0

A.7. 99% Occupied bandwidth

Method of Measurement: See ANSI C63.10-2013-clause 12.4.2.

a) The instrument center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be between 1.5 times and 5.0 times the OBW.

b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW, and VBW shall be approximately three times the RBW, unless otherwise specified by the applicable requirement.

c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than [10 log (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2.

d) Step a) through step c) might require iteration to adjust within the specified range.

e) Video averaging is not permitted. Where practical, a sample detection and single sweep mode shall be used. Otherwise, peak detection and max hold mode (until the trace stabilizes) shall be used.

f) Use the 99% power bandwidth function of the instrument (if available) and report the measured bandwidth.

g) If the instrument does not have a 99% power bandwidth function, then the trace data points are recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at the lowest frequency, are placed in a running sum until 0.5% ofthe total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5% of the total is reached; that frequency is recorded as the upper frequency. The 99% power bandwidth is the difference between these two frequencies.

h) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

Measurement Uncertainty:

Measurement Uncertainty	60.80Hz

EUT ID: UT32a

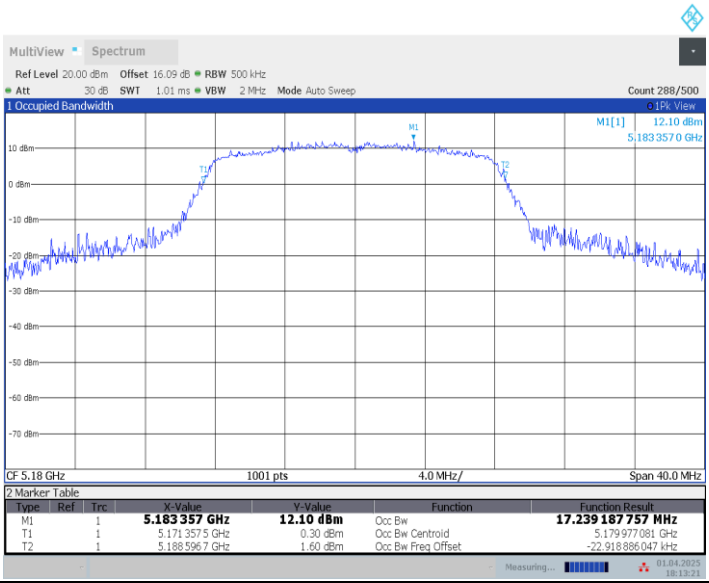
Measurement Result:

TestMode	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	5180	17.239	5171.3575	5188.5967	---	---
	5200	17.189	5191.3978	5208.5864	---	---
	5240	17.353	5231.3007	5248.6541	---	---
	5260	17.203	5251.4157	5268.6187	---	---
	5280	17.344	5271.3587	5288.7023	---	---
	5320	17.411	5311.3064	5328.7177	---	---
	5500	17.317	5491.3363	5508.6530	---	---
	5580	17.336	5571.3012	5588.6368	---	---
	5700	17.452	5691.2110	5708.6632	---	---
	5720	17.475	5711.3026	5728.7781	---	---

11N20SISO	5180	18.182	5170.8845	5189.0666	---	---
	5200	18.216	5190.8935	5209.1093	---	---
	5240	18.255	5230.8460	5249.1006	---	---
	5260	18.376	5250.8054	5269.1817	---	---
	5280	18.21	5270.8584	5289.0684	---	---
	5320	18.374	5310.7892	5329.1636	---	---
	5500	18.242	5490.8712	5509.1133	---	---
	5580	18.35	5570.8048	5589.1545	---	---
	5700	18.352	5690.7910	5709.1433	---	---
	5720	18.398	5710.8203	5729.2180	---	---
11N40SISO	5190	36.951	5171.6037	5208.5549	---	---
	5230	36.97	5211.5380	5248.5075	---	---
	5270	36.939	5251.6056	5288.5444	---	---
	5310	36.917	5291.5701	5328.4873	---	---
	5510	36.986	5491.5219	5528.5081	---	---
	5550	37.055	5531.4699	5568.5246	---	---
	5670	36.978	5651.5777	5688.5557	---	---
	5710	37.153	5691.4635	5728.6164	---	---
11AC80SISO	5210	75.284	5172.3762	5247.6605	---	---
	5290	75.438	5252.3754	5327.8135	---	---
	5530	75.433	5492.3195	5567.7523	---	---
	5610	75.379	5572.2709	5647.6494	---	---
	5690	75.516	5652.3655	5727.8812	---	---

Test graphs as below:

11A_Ant1_5180



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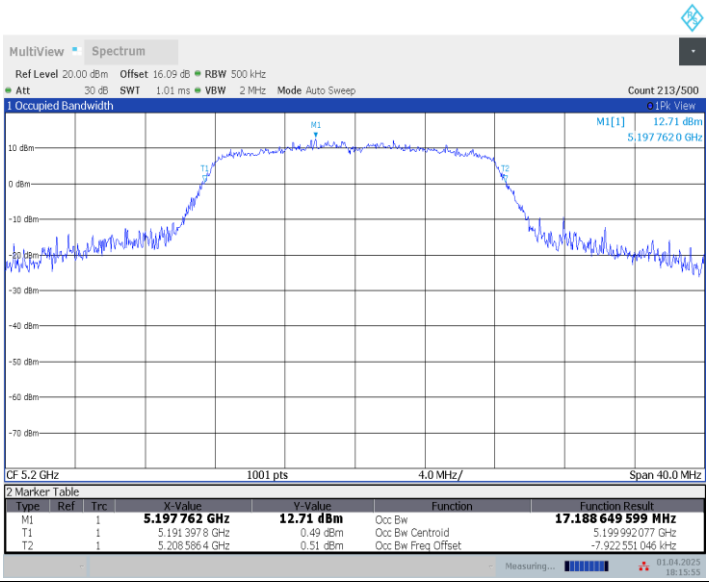

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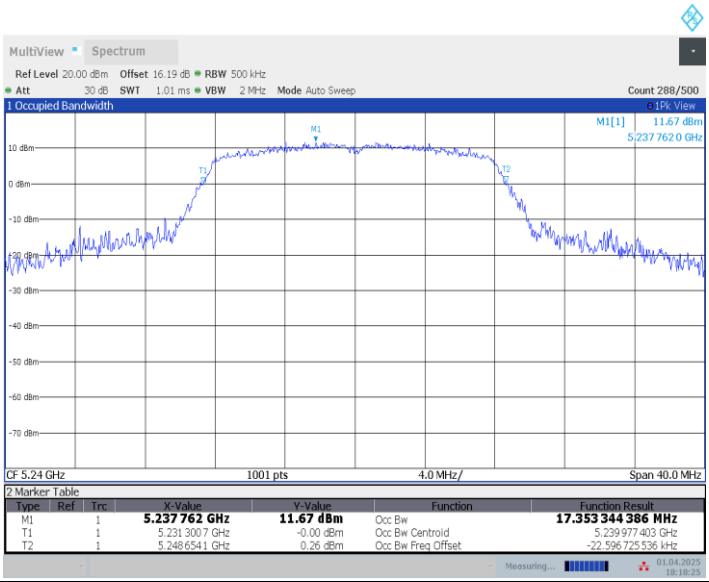

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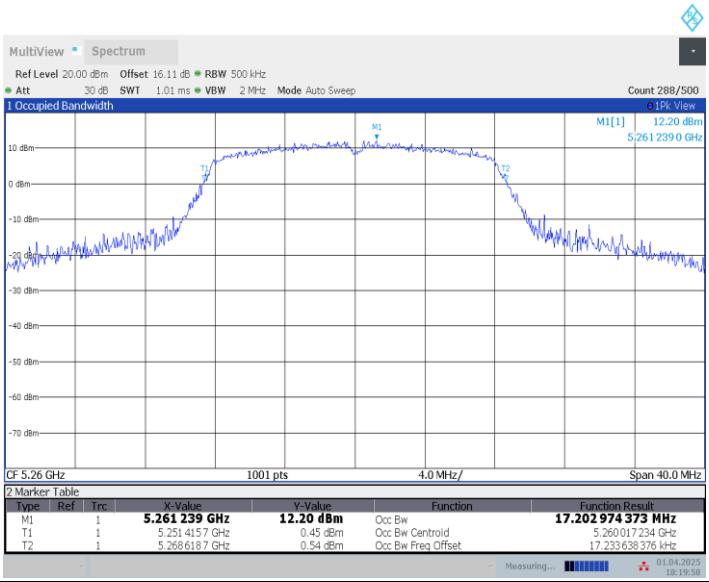

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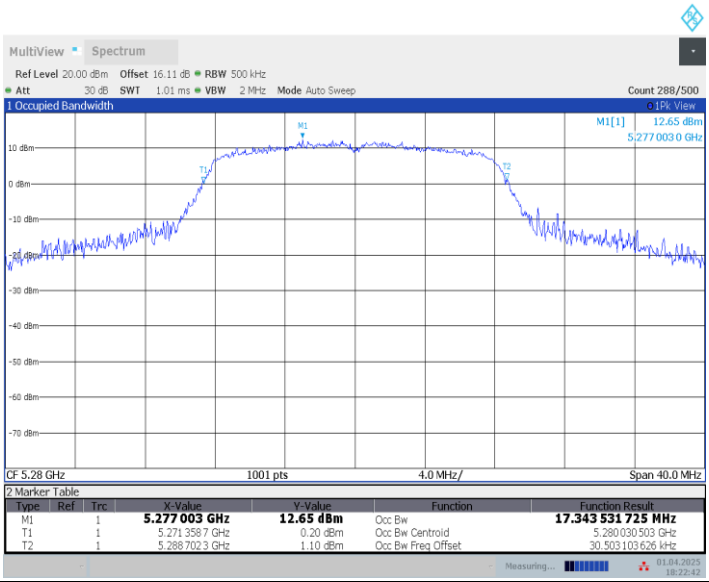

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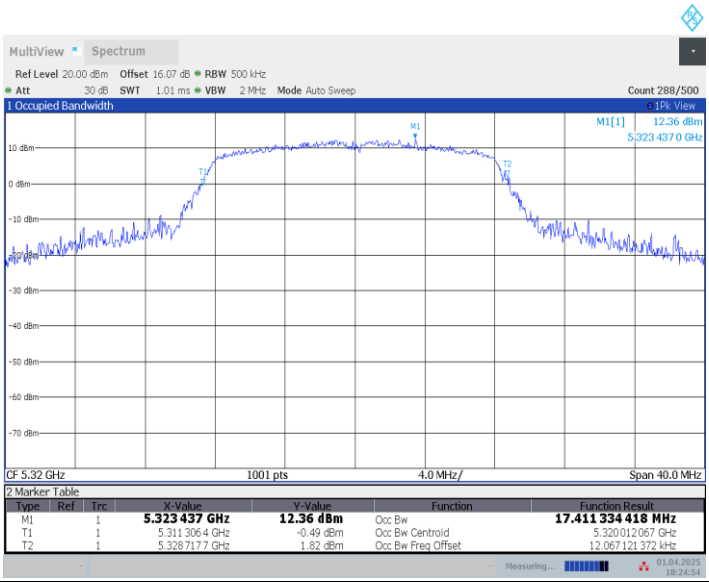

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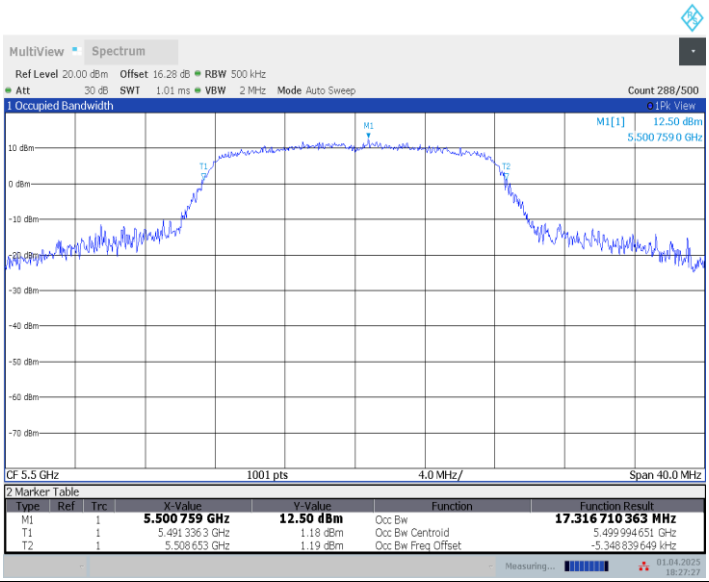

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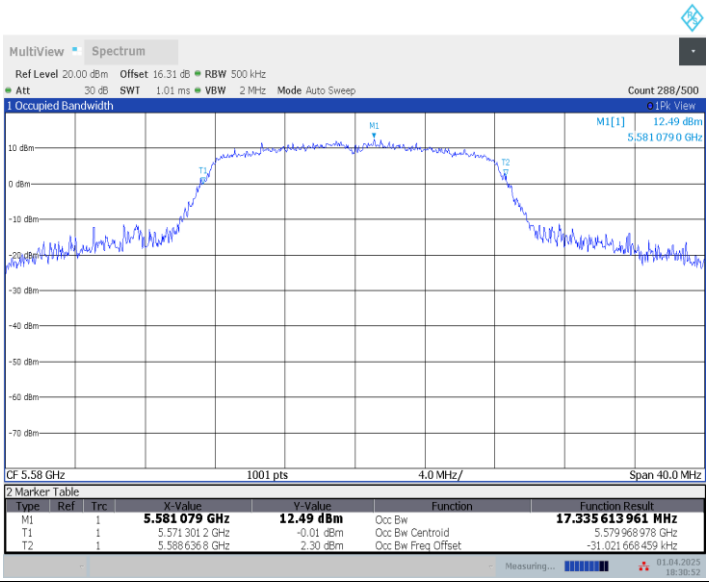

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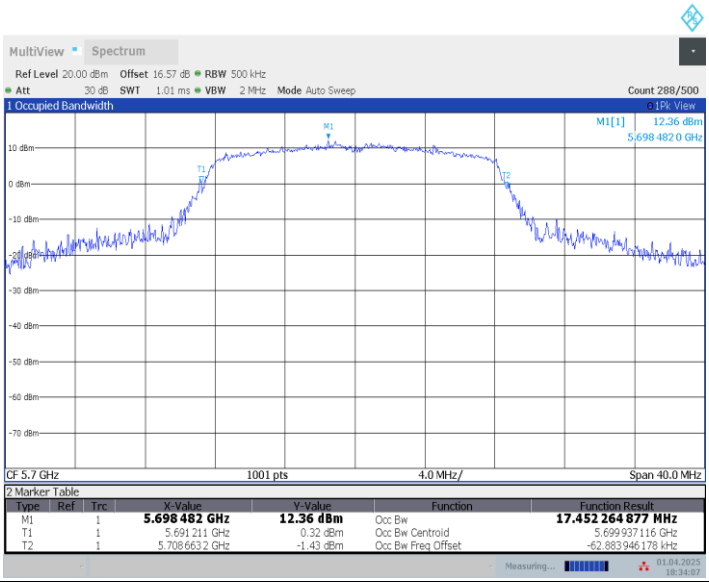

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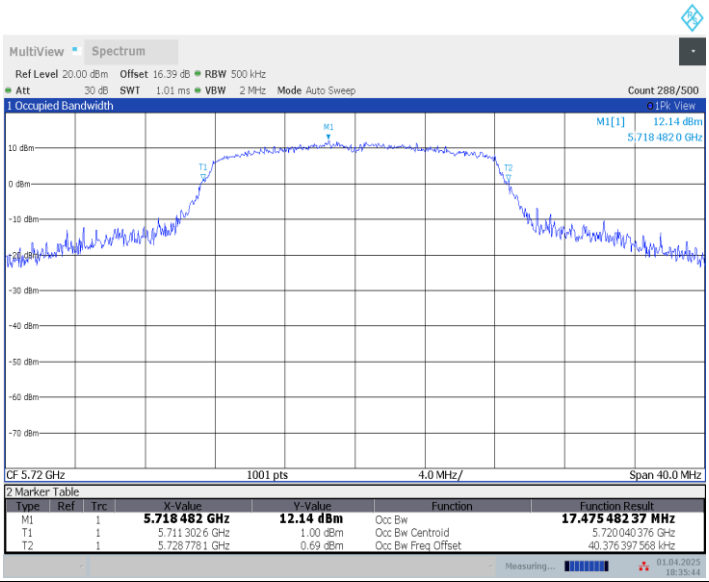

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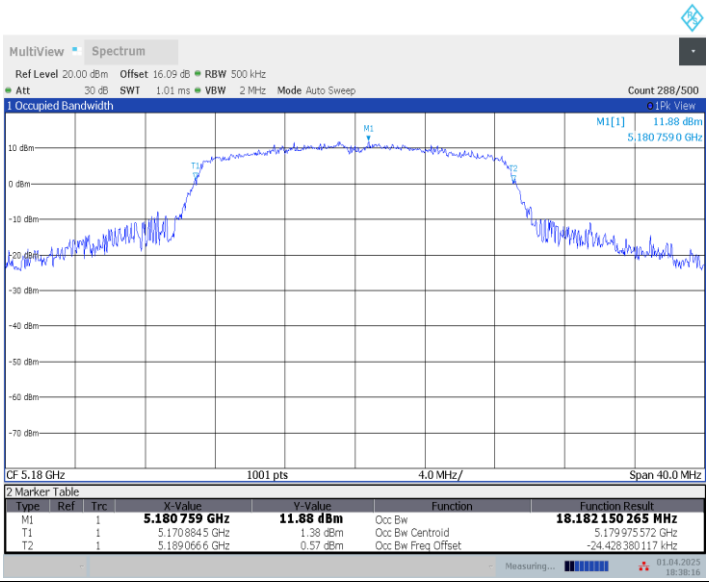

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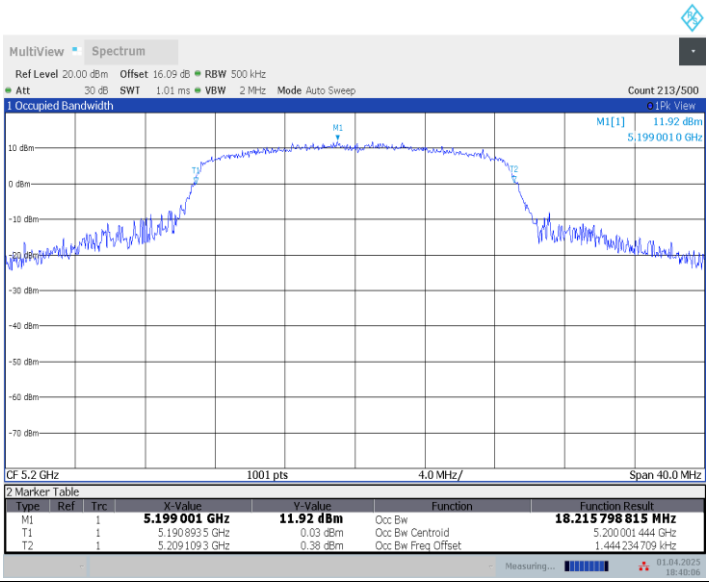

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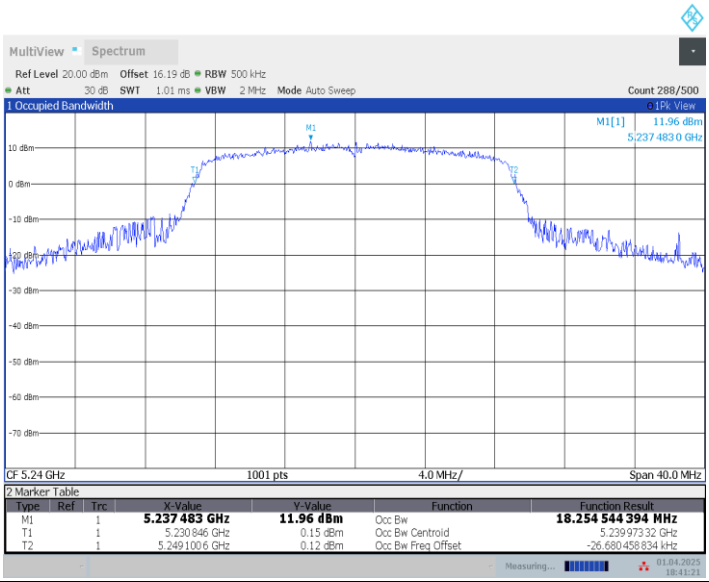

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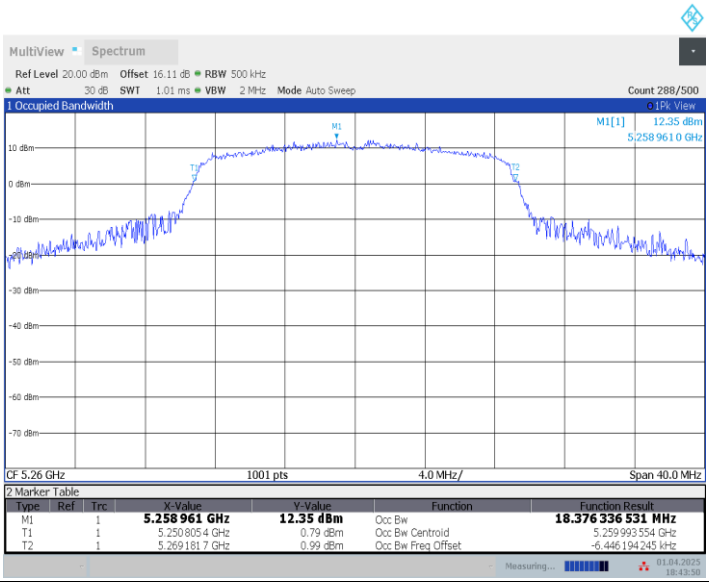

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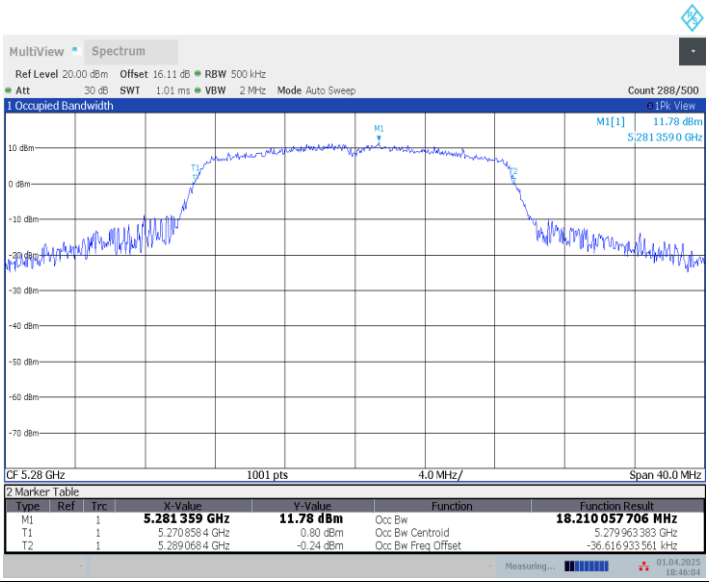

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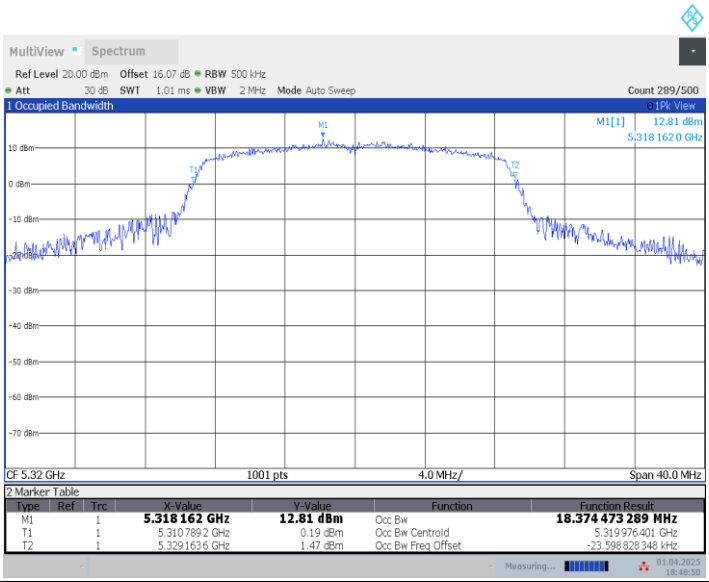

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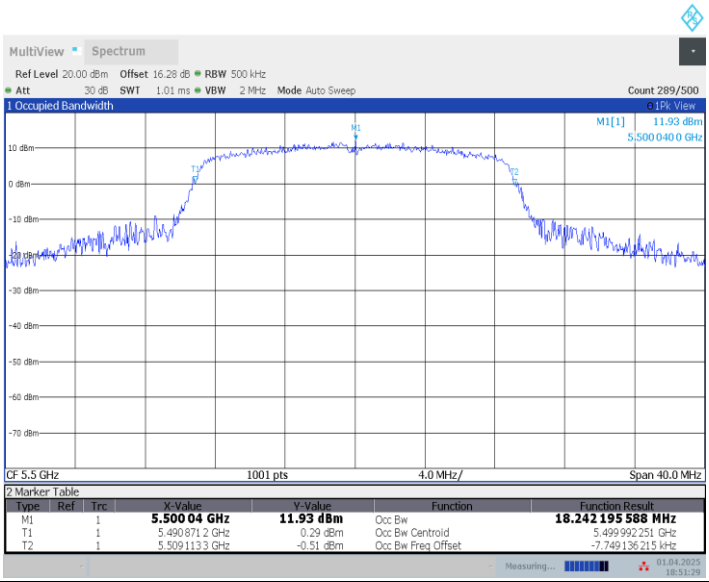

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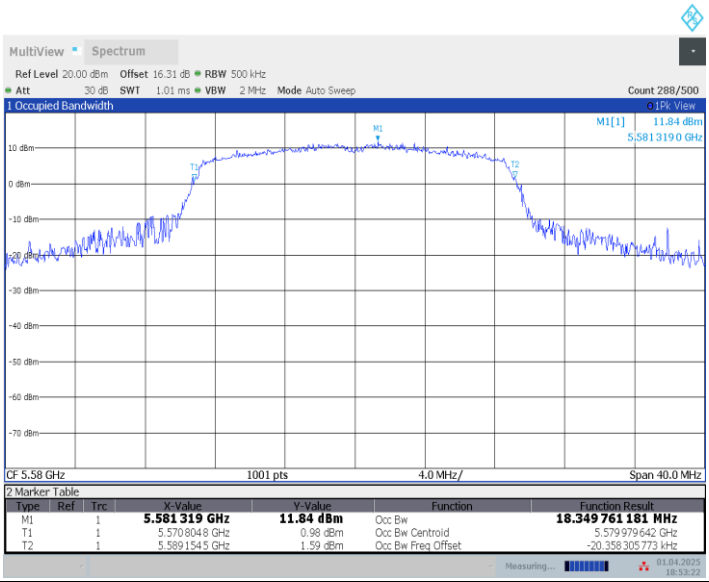

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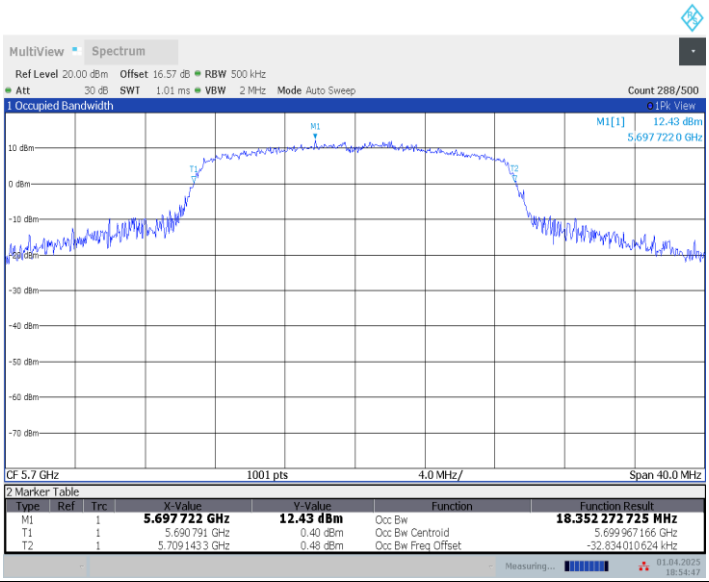

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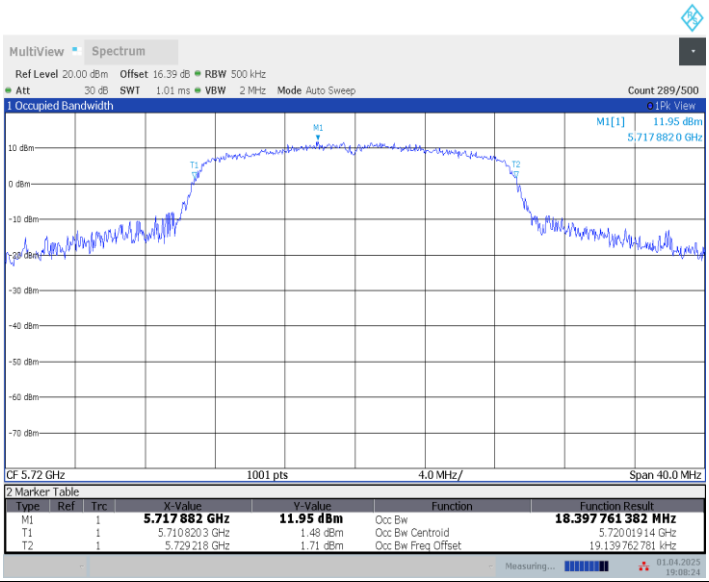

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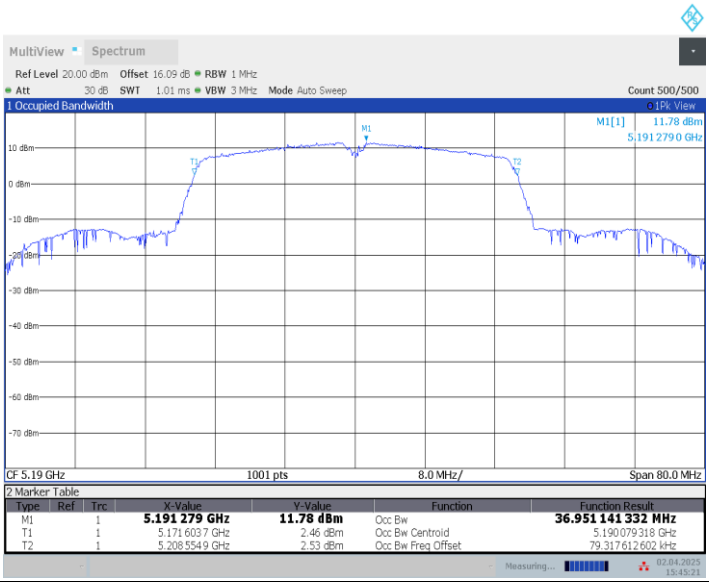

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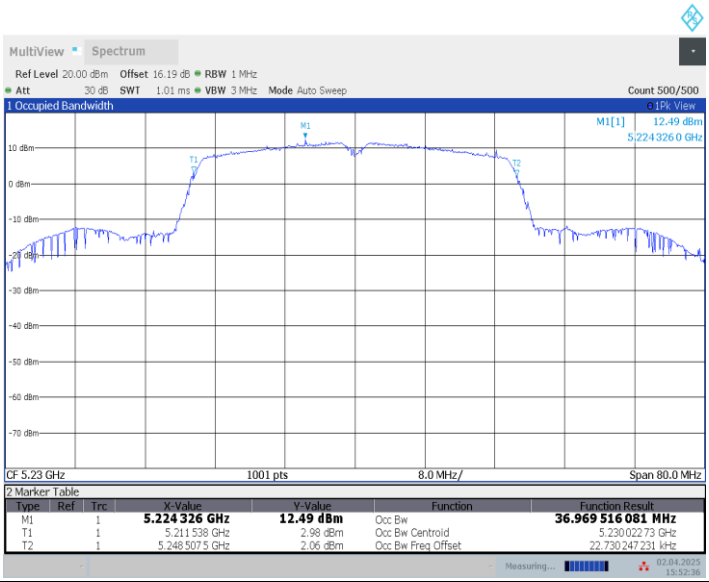

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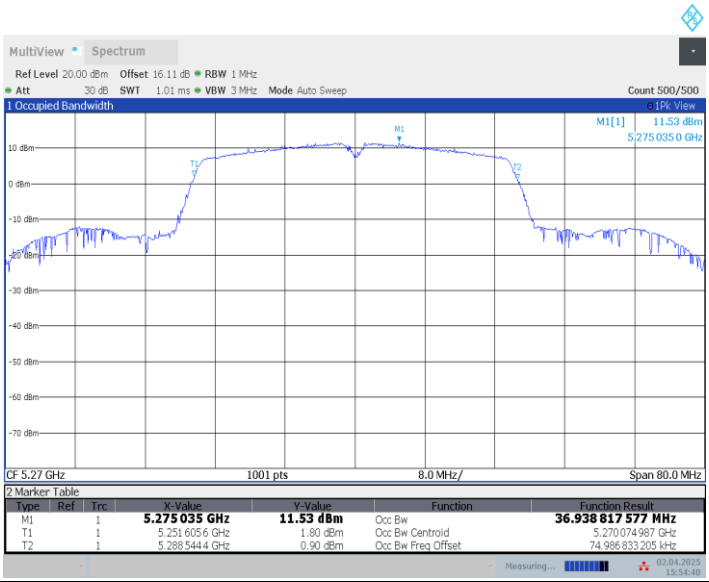

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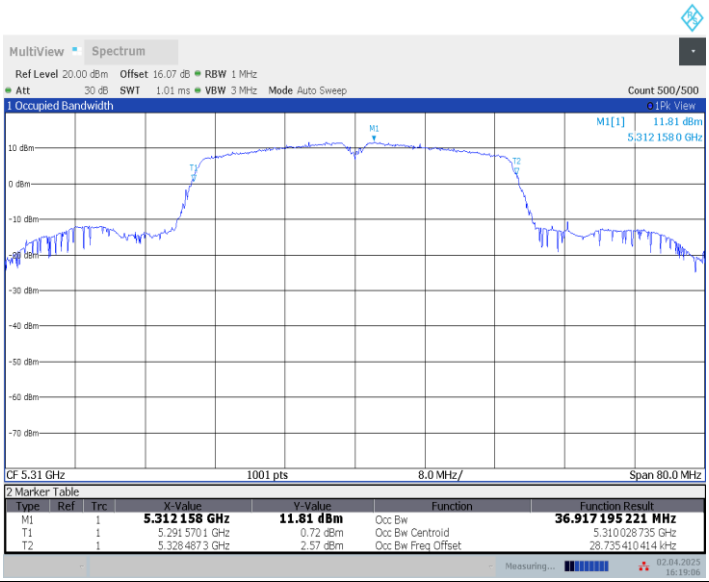

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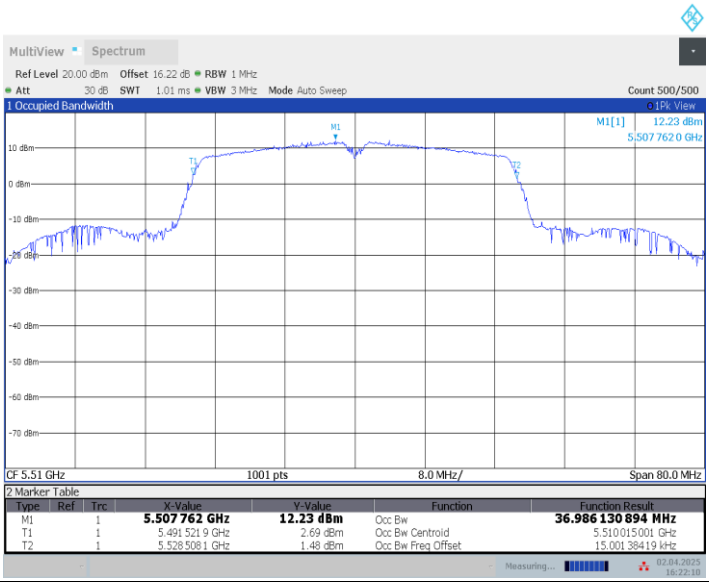

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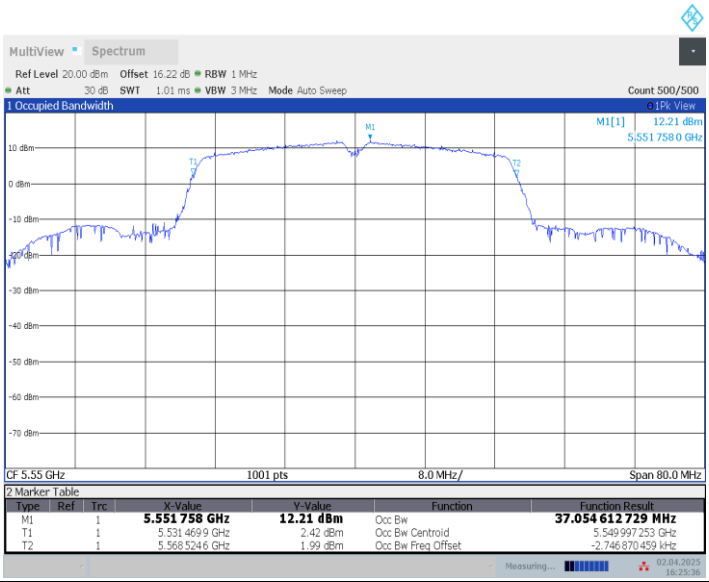

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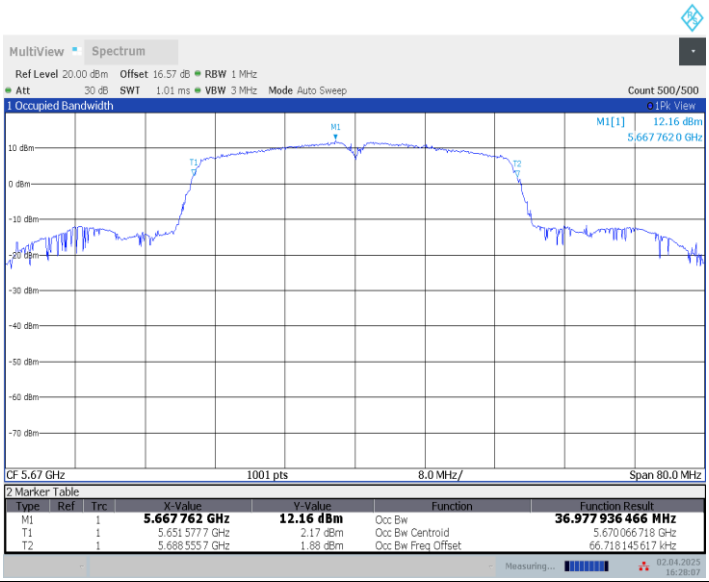

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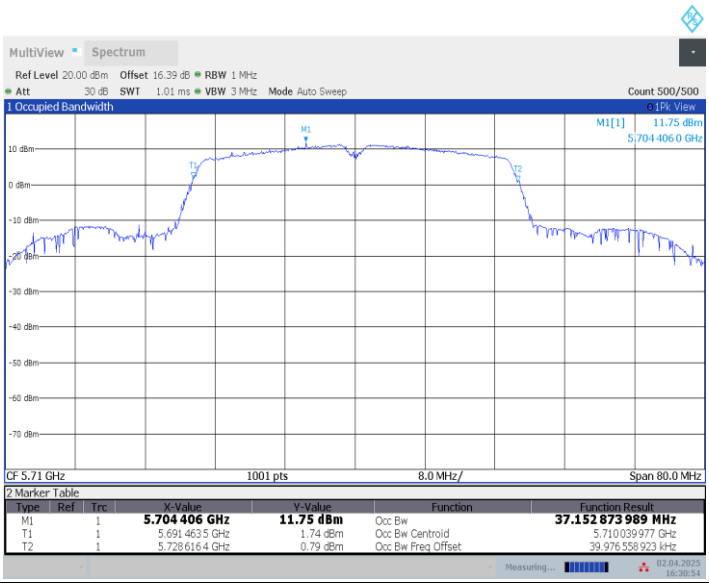

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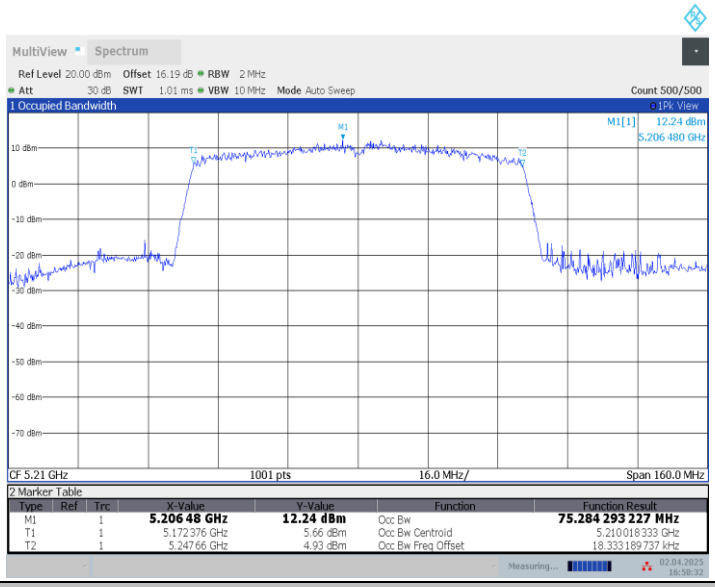

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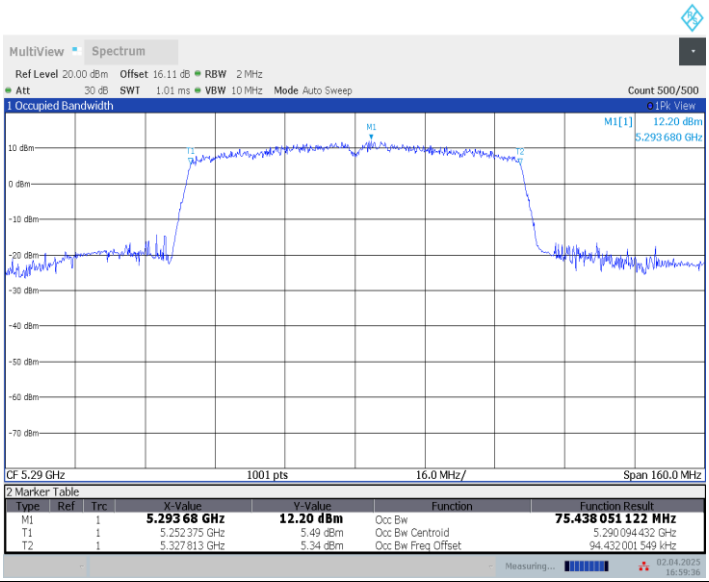

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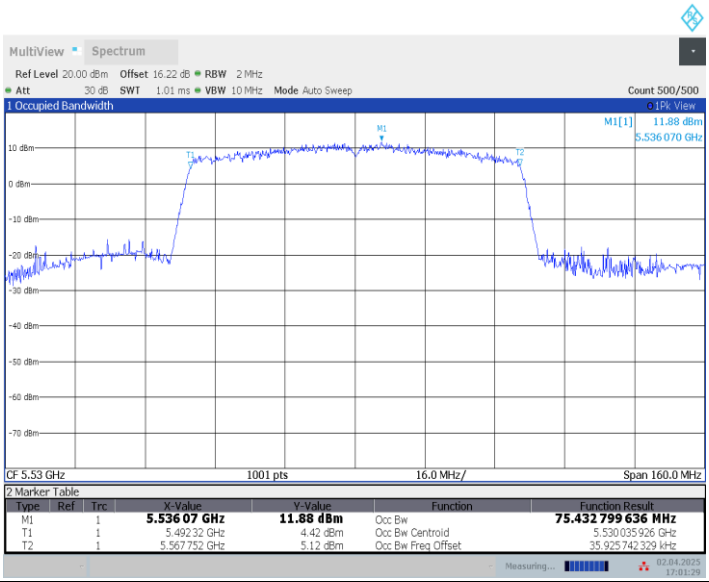

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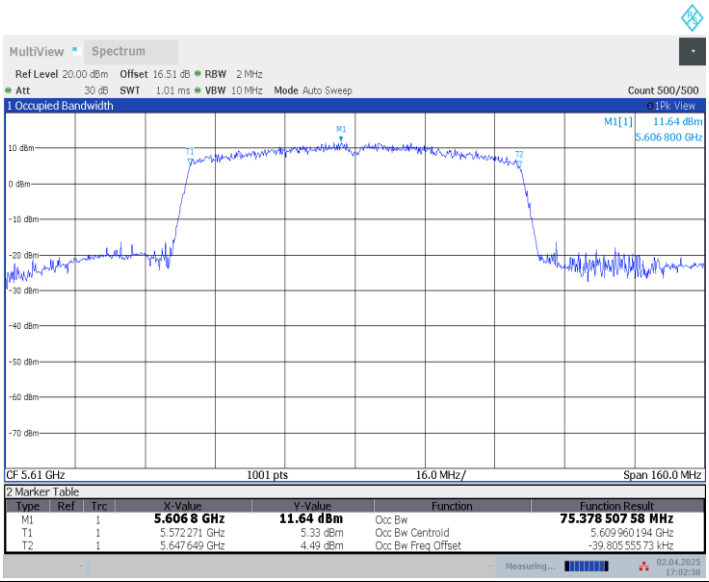

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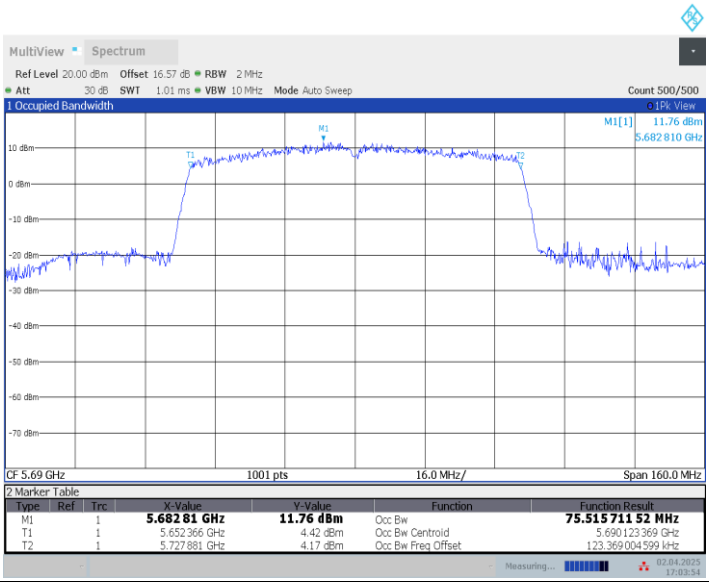

Conclusion: PASS

A.8. Power control

A Transmission Power Control mechanism is not required for systems with an e.i.r.p. of less than 27dBm (500 mW).

A.9. Antenna Requirement

The antenna of the device is permanently attached. There are no provisions for connection to an external antenna.

The unit complies with the requirement of FCC Part 15.203.

ANNEX B: EUT parameters

Disclaimer: The antenna gain and worse case provided by the client may affect the validity of the measurement results in this report, and the client shall bear the impact and consequences arising therefrom.

ANNEX C: Accreditation Certificate

Accredited Laboratory

A2LA has accredited

TELECOMMUNICATION TECHNOLOGY LABS, CAICT

Beijing, People's Republic of China

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated April 2017*).

Presented this 23rd day of July 2024.

Mr. Trace McInturff, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 7049.01
Valid to July 31, 2026

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.

***** END OF REPORT BODY *****